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Two New Species of *Gordius* (Gordioidea) from Japan

With 2 Text-figures

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ABSTRACT Two new species of horse-hair worms, *Gordius luteopunctatus* n. sp. and *G. ogatai* n. sp., are described on the basis of 36 specimens (29 males and 7 females) and 51 specimens (37 males and 14 females) respectively. These new species are distinguished from the other species of *Gordius* by their peculiar characters.

Of the horse-hair worms of the genus *Gordius* from Japan, only two species, *Gordius japonicus* and *G. cavernarum* have been reported by the author. Through the courtesy of M. Ed. Ken-ichi Hashimoto, Shinjuku High School, and Mr. Hiroki Urashima, Tōhō High School, the author lately had an opportunity of examining many specimens of *Gordius* found in Japan. After a careful study, it became evident that these horse-hair worms belong to two new species.

Gordius luteopunctatus sp. nov.

(Fig. 1)

Twenty-nine males, variable in size, measuring 133–419 mm long by 0.6–1.1 mm broad at the thickest portion and 7 females, 118–482 mm long by 0.6–1.2 mm broad. Body colour light yellowish brown or brown.

The diagnostic characters of this new species are as given below:

- 1) Anterior end white in colour, with dark neck ring.
- 2) With ventral and dorsal lines.
- 3) Cuticle areolated in both male and female, the areoles being long and irregularly hexagonal in shape, their major axes nearly perpendicular to the body axis. In male, light yellow spots, visible to the naked eye or through a magnifying glass, are scattered on the cuticle.
- 4) Posterior end of male (Fig. 1): Tail-lobes rather long, somewhat diver-

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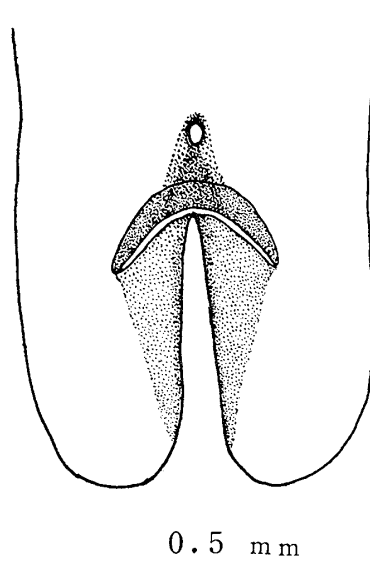


Fig. 1. Posterior end of male (ventral view).

gent, not concave on their internal sides. Postcloacal cuticular ridge, situated at the position of the point of bifurcation of lobes, moderate in size and slightly open V in shape, with the ends passing onto the lobes, about $1/4$ the lobe-length; colour brown, its posterior edge being white. Cloacal opening oval in outline, located a short distance anterior to the middle of the ridge. The internal sides of the tail-lobes as well as the area between the cloacal opening and the ridge, including the periphery of the former, are coloured dark brown. The ratio of lobe-length to lobe-width is 1.55 on an average.

5) Posterior end of female: The round cloacal opening is surrounded by a dark brown ring encircled by another light brown ring.

Discussion. This new species has some resemblance to the following species: *Gordius amoyensis* Tang, *G. aquaticus* Linné, *G. albopunctatus* G. W. Müller, *G. tatrensis* Janda and *G. pavlovskii* Kirjanova. It is distinguished from *G. amoyensis* by the presence of the following characteristics: 1) cuticle with areoles, 2) yellowish spots of much larger size, 3) V-shaped ridge smaller, 4) bristles absent on the body-ends, 5) tail-lobes coloured dark on their internal sides, etc.; from *G. aquaticus* by 1) cuticle with areoles, 2) nearly V-shaped ridge, 3) ridge with its ends passing onto the tail-lobes at a more posterior level, 4) tail-lobes coloured dark on their internal sides, etc., from *G. albopunctatus* by 1) tail-lobes not swollen, 2) nearly V-shaped ridge with posterior white edge, 3) brown coloured area between the cloacal opening and the ridge, 4) ventral line not bifurcated at the rear end, etc.; from *G. tatrensis* by 1) tail-lobes not swollen, 2) ridge small, with its ends passing onto the lobes by only $1/4$ the lobe-length, 3) V-shaped ridge, 4) short bristles absent on the tail-lobes, etc.; from *G. pavlovskii* by 1) areoles

hexagonal in shape, 2) V-shaped ridge, 3) tail-lobes not concave on their internal sides, 4) brown coloured area between the cloacal opening and the ridge, etc.

Host. Unknown.

Type-series. 10 ♂♂ (including holotype), 2 ♀♀ (including allotype), Tomiyama, Batô-chô, Tochigi Pref., 5 March 1978, coll. by H. Urashima; 5 ♀♀, the same place, 12 May 1977, coll. by H. Urashima; 19 ♂♂, the River Dôshi, Kanagawa Pref., 1 November 1973, coll. by J. Kondô.

*Goreius ogatai*²⁾ sp. nov.

(Fig. 2)

Thirty-seven males, measuring 135–360 mm long by 0.6–1.2 mm broad at the thickest portion and 14 females, 218–480 mm long by 0.8–1.2 mm broad. Body colour light yellowish brown or brown.

The diagnostic characters of this new species are as given below:

- 1) Anterior end terminally rounded, white in colour, without neck ring.
- 2) No ventral and dorsal lines.
- 3) Cuticle not areolated.
- 4) Posterior end of male (Fig. 2): Tail-lobes short (as long as wide), somewhat divergent and not concave on their internal sides.

Postcloacal cuticular ridge, situated nearer to the cloacal opening than to the position of the bifurcated point of lobes, moderate in size and crescent in shape, with rounded ends not passing onto the tail-lobes.

Cloacal opening oval in shape, being surrounded by a dark brown ring. Neither granules nor hairs can be recognized. The ratio of lobe-length to lobe-

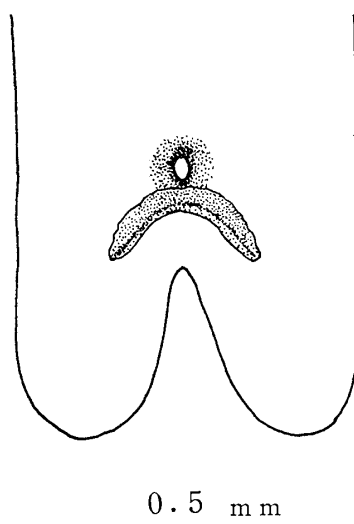


Fig. 2. Posterior end of male (ventral view).

- 2) This species is named in memory of the late Dr. Tôji Ogata.

width is 1.05 on an average.

5) Posterior end of female: Not swollen, rounded terminally. The round cloacal opening is surrounded by a brown ring.

Discussion. This new species has some resemblance to the following species: *Gordius semilunaris* von Linstow, *G. flavus* von Linstow and *G. hawaiiensis* Heinze. It is, however, distinguished from *G. semilunaris* by the presence of the following characteristics: 1) crescent ridge not so large, with rounded ends, 2) ends of ridge not passing onto the tail-lobes, 3) ridge situated very near to the cloacal opening, 4) internal sides of the lobes not coloured, etc.; from *G. flavus* by 1) absence of areoles, 2) absence of granules on cuticle, 3) small tail-lobes, 4) ridge situated very near to cloacal opening, 5) absence of ventral line, etc.; from *G. hawaiiensis* by 1) absence of areoles, 2) crescent ridge, 3) absence of granules on tail-lobes, 4) absence of ventral line, etc.

Host. Unknown.

Type-series. 6 ♂♂ (including holotype), 1 ♀ (allotype), Nakayama, Matsumoto-shi, Nagano Pref., 16 August 1977, coll. by T. Shimazu; 13 ♂♂, 9 ♀♀, Toyoda, Suwa, Nagano Pref., 18 August 1978, coll. by M. Iizima; 7 ♂♂, 4 ♀♀, Tomiyama, Batô-chô, Tochigi Pref., 15 September 1978, coll. by H. Urashima; 10 ♂♂, Sanriku-chô, Iwate Pref., 12 September 1978, coll. by K. Suzuki; 1 ♂, Tanogô, Suzaki-shi, Kôchi Pref., 5 September 1978, coll. by A. Ochiai.

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